

and higher QALYs. The results were robust to sensitivity analyses. **CONCLUSIONS:** ETV is a dominant treatment option across all populations in the treatment of patients with CHB, compared to LVD and ADV. The results clearly suggest that suppressing VL is economically attractive.

PIN8

COST-EFFECTIVENESS OF INTERVENTIONS ENSURING BLOOD TRANSFUSION SAFETY IN AFRICA

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OBJECTIVES: The risk of HIV, HBV and HCV transmission by blood transfusion in sub Saharan Africa is (very) high compared to the developed world. In this economic evaluation the cost-effectiveness of interventions (donor management, quality of testing, administration and additional tests) improving blood transfusion safety is explored. **METHODS:** The residual risks of HIV, HBV and HCV transmission were derived for Angola, Benin, Botswana, Côte d'Ivoire, Ethiopia, Kenya, Mozambique, Namibia, Rwanda, Uganda and Zambia from the Global Database on Blood Safety (GDBS; WHO, 2004). Cost-effectiveness ratios of the scenarios were determined by using a decision tree combined with a Markov-model. Health gains and costs were discounted by 3%. **RESULTS:** The CURRENT (current status) scenario is cost-saving compared to the NONE (no screening, no donor management) scenario, averting 2.0 million Disability Adjusted Life Years (DALYs) and saving US\$ 82 million annually. Over 94,000 new HIV infections are averted and 27,674 and 3360 new HBV and HCV infections respectively. Improving the blood transfusion services from the CURRENT to the BEST (100% screening, no errors) scenario shows a cost-effectiveness ratio of 56.24 US\$/DALY averted. With this step 2792 new HIV infections are averted and 1723 and 1622 new HBV and HCV infections respectively. In addition to the BEST scenario, HIV p24 and HCV-antigen testing would avert 19 DALYs at annual net costs of US\$ 1.2 million (63,957 US\$/DALY averted). Extending the BEST scenario with single donation multiplex NAT averts 60 DALYs at annual net costs of US\$ 9.7 million (161,051 US\$/DALY averted). **CONCLUSIONS:** The current level of blood transfusion safety provided in the included countries is cost-saving. However, maximizing the effects of donor management and screening (coverage and errors) shows a favorable cost-effectiveness ratio. Introducing additional tests alongside antibody testing is associated with high costs and limited reduction of transmission risks.

PIN9

COST-EFFECTIVENESS ANALYSIS OF COMBINED THERAPY WITH PEGINTERFERON ALFA-2A (40KD) (PEGASYS) AND RIBAVIRIN (COPEGUS) IN PATIENTS WITH CHRONIC C HEPATITIS (CHC) AND HUMAN IMMUNODEFICIENCY VIRUS (HIV) CO-INFECTION

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OBJECTIVE: The AIDS Pegasis Ribavirin International Coinfection Trial (APRICOT) demonstrated the efficacy and safety of peginterferon alfa-2a plus ribavirin (RBV) and interferon alfa plus ribavirin (IFN/RBV) in patients co-infected with HIV-HCV.

However, the cost-effectiveness of treating CHC with peginterferon alfa-2a/RBV in this patient population has not assessed from the Spanish National Health care System (NHS) perspective. The objective was to establish the clinical prognosis, costs and cost-effectiveness of peginterferon alfa-2a (180 mcg/week) plus RBV versus IFN (3 million IU, three times a week) plus RBV, in patients with HIV-HCV co-infection from a Spanish national health care system (NHS) perspective. **METHODS:** A Markov model was developed to simulate the disease progression of 40-year old patients with HIV-HCV co-infection. Fibrosis progression rates were obtained from published studies. Efficacy, in terms of sustained virological response (SVR), for peginterferon alfa-2a plus RBV and IFN/RBV in patients with genotype 1, genotypes 2/3 and genotypes 1/2/3 was obtained from APRICOT. Transition probabilities and quality of life estimates were obtained from published literature. Unit costs were obtained from a Spanish database. Cost and outcomes were discounted by 3.5% annually. **RESULTS:** In genotype 1 patients, peginterferon alfa-2a plus RBV compared with IFN/RBV increases patients life expectancy by 1.27 years (0.77 quality-adjusted life years (QALYs)), yielding an incremental cost-effectiveness ratio (ICER) of €3,677/life year gained (LYG) (€6077/QALY gained). In genotypes 2/3 patients, peginterferon alfa-2a plus ribavirin increases life expectancy by 4.63 years (2.33 QALYs), yielding an ICER of €569/LYG (€1130/QALY gained). In genotypes 1/2/3 patients, the ICER is €1487/LYG (€2762/QALY gained). **CONCLUSIONS:** From the Spanish NHS perspective, peginterferon alfa-2a (40KD) (PEGASYS®) plus ribavirin (COPEGUS®) in patients with HIV-HCV co-infection is a cost-effective treatment option, regardless of HCV genotype.

PIN10

COST-EFFECTIVENESS OF PEGINTERFERON ALFA-2A (40KD) FOR THE TREATMENT OF CHRONIC HEPATITIS B IN ITALY

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Chronic Hepatitis B (CHB) is caused by chronic infection with Hepatitis B Virus (HBV) and represents a major global health problem. Traditional CHB treatments are lamivudine (LAM) and interferon alfa-2a (IFN). Peginterferon alfa-2a (PEG) has been recently approved for the treatment of CHB disease. **OBJECTIVES:** To assess the economic and clinical impact of the use of peginterferon alfa-2a (40KD) versus LAM for the treatment of HBeAg-negative CHB and versus IFN for the treatment of HBeAg-positive CHB disease in Italy. **METHODS:** The CHB disease course was simulated with the use of a Markov model. The simulation was prolonged over a cohort's lifetime. Comparative evaluation of PEG vs. LAM was based on a recent phase III clinical trial in HBeAg-negative CHB. Comparative evaluation of PEG vs. IFN was based on a phase II clinical trial comparing the two treatments in HBeAg-positive CHB. Considered scenarios were: 48-week PEG vs LAM treatment; 48-week PEG vs 4-year LAM; 24-week PEG vs. IFN. Clinical outcomes measured were average life years gained (LYs) and quality-adjusted life years (QALYs). Direct costs were considered and valued according to current Italian national prices, tariffs and published literature. Deterministic and probabilistic sensitivity analyses were performed and acceptability curves generated. Costs and outcomes were discounted at a 3.5% annual rate. **RESULTS:** 0.82, 0.68, and 0.26 discounted QALYs per patient are gained with PEG vs 48-week LAM, 4-year LAM and IFN, respectively. Discounted incremental costs per patient are €7021, €5725, and €2304. Corresponding cost-effectiveness and cost-utility ratios are €9440/LY and €8603/QALY, €9218/LY and €8368/QALY,

€9575/LY and €8714/QALY. **CONCLUSIONS:** The use of peginterferon alfa-2a (40KD) in CHB patients, as compared with current practice, has the potential of improving clinical outcomes with a cost per LY and QALY gained below that of universally accepted therapies.

PIN11

COST-EFFECTIVENESS OF OSELTAMIVIR FOR THE TREATMENT OF INFLUENZA IN ADULTS AND CHILDREN IN FINLAND

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OBJECTIVE: To estimate the cost-effectiveness of oseltamivir in the treatment of influenza in three different population groups in Finland: Otherwise Healthy Adults aged 13-65 years (OHA); Children aged 1-12 years (C); At-Risk Patients including elderly ≥65 years (ARP). **METHODS:** The cost-effectiveness of oseltamivir vs symptomatic relief was compared using a decision-analytic model. Analyses were made both from the health-care payer and the societal perspective. Health Outcomes determined were days of normal activity and quality-adjusted life years (QALY) gained. A life-time horizon was used to take account of life-years lost due to mortality. Probabilities, utilities and resource use data in the model were derived from published Finnish population level trials and registers, from oseltamivir clinical trials and from other published literature. A discount rate of 5 % was applied. Unit costs were obtained from the 2001 Finnish Guidelines for Health Care Unit Cost converted to a 2005 level. Probabilistic Sensitivity Analysis was used to explore the uncertainty around the base case means. **RESULTS:** The mean cost from a health care payer perspective per day of normal activity and per QALY gained respectively for the 3 different population groups were: OHA €27/€12,008; C €14/€15,469; ARP €7/€685. In OHA, oseltamivir is cost-saving when loss of productivity is taken into account. **CONCLUSION:** The analyses demonstrate that, in comparison with usual care, cost per QALY gained with oseltamivir is below internationally accepted thresholds. Oseltamivir is a cost-effective treatment for influenza in all population groups (particularly in the ARP group) and is cost-saving from a societal perspective in OHA.

PIN12

COST MINIMALISATION ANALYSIS OF AVERAGE ACUTE HOSPITAL INFECTIONS TREATMENT WITH TARGOCID (TEICOPLANIN) OR VANCOMYCINE FROM SERVICE-PROVIDER PERSPECTIVE IN POLAND

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OBJECTIVES: To assess the clinical effectiveness and costs of teicoplanin or vancomycin use in acute hospital infections treatment from service-provider perspective in Poland. **METHODS:** Results of a systematic review of published clinical trials selected in accordance with Cochrane Collaboration criteria were used to assess effectiveness and safety. Systematic review was conducted in April 2006; Medline (Pubmed) Cochrane and EMBASE were searched. Only RCTs with credibility assessment of 2 or more points according to Jadad scale were included in the systematic review; relevant clinical data were pooled with RevMan 4.2. Overall costs of treatment were taken into account; pharmacotherapy and drug administration, drug monitoring, patient monitoring and adverse events influenced the total cost of treatment. CMA was used to assess savings from service-provider perspective in case of cheaper drug use in clinical practice. Sensitivity analysis was made according to range of costs of

vancomycin generics available in Poland and number of days of therapy. All calculations were performed for 2006 (1Euro = 3.8PLN). **RESULTS:** Nineteen relevant clinical trials with direct comparison of teicoplanin and vancomycin were found. Clinical effects of the drugs were similar and no significant differences in effectiveness were found in pooled data from RCTs. Teicoplanin treatment was associated with higher costs of drug acquisition compared to vancomycin (difference: 337PLN (€88.7) but Targocid occurred much cheaper referring to: drug level monitoring, patient monitoring and administration costs. So, overall treatment with teicoplanin occurred cheaper than vancomycin; savings from service-provider perspective were: 743.3PLN (€195.6) per therapy. **CONCLUSIONS:** Targocid treatment lead to significant savings for service-providers in average acute hospital infections treatment in Poland in comparison to vancomycin.

PIN13

ECONOMIC EVALUATION OF EARLY MONOTHERAPY WITH INTERFERON VERSUS DELAYED COMBINATION THERAPY WITH INTERFERON AND RIBAVIRIN IN PATIENTS WITH ACUTE HEPATITIS C

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OBJECTIVES: Comparative evaluation of two options for the treatment of acute hepatitis C: immediate monotherapy of all patients with (pegylated) interferon versus delayed combination therapy of patients who do not experience spontaneous viral clearance within three months after diagnosis with interferon and ribavirin, and also a comparison between the applied monotherapies for the immediate treatment option. **METHODS:** Economic evaluation is based on three prospective nonrandomized outcome studies. In two monotherapy studies (n = 128) patients were treated with 5 million units of Interferon alfa-2b daily during the first 4 weeks and three times a week during the following 20 weeks or with 1.5 µg/kg pegylated Interferon alfa-2b weekly over a period of 24 weeks. In the combination therapy study different dosages of interferon and ribavirin were administered. The evaluation focused on direct medical costs and included physician's fees, laboratory, as well as medication costs, taking a societal perspective. Partial indirect costs were raised ex post by enquiry of participants and physicians. Costs were valued at 2002 market-prices. **RESULTS:** Monotherapy and combination therapy of hepatitis C showed a similar high efficacy (sustained response rate: 87% vs. 90%). Patients in delayed combination therapy study showed a quite high rate of spontaneous viral clearance of almost 50%. Direct medical costs of immediate therapy (€7064/patient) were €321 lower than those of delayed therapy (p = 0.8). Pegylated compared with unpegylated interferon yielded €511 additional costs per patient (p = 0.01) in monotherapies. Considering the current genotype-dependent therapy standard and the observed rate of sustained responders, average costs per patient amounted to €10,848 and were about 50% higher than costs of the immediate monotherapy. Sensitivity analysis indicated a robust model. **CONCLUSIONS:** As there are no significant differences in treatment efficacy, monotherapy seems to be slightly more cost-effective. Medication is responsible for more than 90% of direct costs.